

REMARKS**Specification Amendment**

The specification has been amended to reflect issuance of several of the incorporated disclosures as U.S. Patents.

Claim Status

Claims 25-39 are pending in the application. The above amendment cancels claim 24, and amends claims 25 and 27. Claims 25, 32, and 35-38 are the independent claims of the application.

Art Rejections

The Office Action rejected claims 25-35 and 37 under 35 U.S.C. §102(e) as being anticipated by Sekido, U.S. Patent Number 6,311,193 (“Sekido” hereinafter). Claims 36, 38, and 39 were rejected as being unpatentable over Sekido in view of Rungta, U.S. Patent Number 6,484,186 (“Rungta” hereinafter). We respectfully request reconsideration of these rejections based on the above amendments and the following arguments.

Each of the independent claims 25, 32, 35, 36, and 37 recites a limitation of computing or maintaining a *summary map*. This expression is defined in the specification: “Summary map — In

general, the term ‘summary map’ refers to a file including an IOR (inclusive OR) bitmap of all the snapmaps.” Application, at page 11, lines 4-5. The term “snapmap” is also defined in the specification: “Snapmap — In general, the term ‘snapmap’ refers to a file including a bitmap associated with the vacancy of blocks of a snapshot. The active map diverges from a snapmap over time as the blocks used by the active file system change during consistency points.” Application, at page 10, line 21 through page 11, line 2. Thus, a “summary map” is an inclusive OR’ed bitmap of the vacancy bitmaps of the snapshots maintained by the file system.

In rejecting independent claims 25, 32, 35, 36, and 37, the Office Action states that Sekido teaches the *summary map* limitations at column 18, line 55 through column 19, line 28; Figure 35; and column 17, lines 23-63. The undersigned attorney has reviewed Sekido, and Sekido’s cited portions in particular, but has not been able to identify a disclosure of a *summary map* as this term is defined in the specification of the present application. Even assuming that snapshot information (or “SS information”) as depicted in Sekido’s Figure 35 and described in Sekido’s cited text is similar to the snapmaps of the present application, there appears to be no disclosure of applying an inclusive OR function to such bitmaps to obtain a summary map. At least for this reason, independent claims 25, 32, 35, 36, and 37 are believed to be patentable over Sekido and over the combination of Sekido and Rungta.

Independent claim 38 recites a limitation of “maintaining a plurality of copies of said active map, at least a first said copy being a substantially true representation of in-use and free blocks, and at least a second said copy being a representation of in-use and free blocks which reflects fewer free blocks than said first copy.” According to the Office Action, Sekido teaches maintaining “at least a

second copy being a representation of in-use and free blocks which reflects fewer free blocks than said first copy” at column 17, lines 23-63. The undersigned attorney has reviewed Sekido, and Sekido’s cited text in particular, but has not identified a teaching of maintaining two active maps, with one of the active maps reflecting fewer free blocks than the other active map. Indeed, it appears that Sekido does not teach storing more than one active map. For example, at column 19, lines 19-27, Sekido teaches storing a map for only selected stripes (those that contain “many invalid blocks”), so that the system “reduces the area for snapshot information and enables an invalid block judgment to be made efficiently for repacking.” Storing the map for only the selected stripes in Sekido’s system is therefore done as an alternative to storing a complete map, and not in addition to storing the complete map. At least for this reason, claim 38 is believed to be patentable over the combination of Sekido and Rungta.

The above discussion addresses rejection of all pending independent claims. As regards the dependent claims not specifically discussed, these claims are patentable together with their base claims and intervening claims, if any.

CONCLUSION

For the foregoing reasons, Applicants respectfully submit that all pending claims are patentable over Sekido and Rungta. To discuss any matter pertaining to the present application, the Examiner is invited to call the undersigned attorney at (858) 720-9431.

Having made an effort to bring the application in condition for allowance, a timely notice to this effect is earnestly solicited.

Respectfully submitted,



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Dated: October 11, 2004

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